The following are the movement vectors that have been defined in code.

Cohesion

Neighbors: team in sight by r and α if they are not GUARDING or STUNNED.

$$\vec{v_c} = v_{max} \frac{\Delta\vec{p}}{\|\Delta\vec{p}\|} \left(\frac{\|\Delta\vec{p}\|}{r} \right)^2$$

Alignment

Neighbors: team in sight by r and α if they are SEEKING or SPREADING

$$\vec{v_{al}} = v_{max} \left(\frac{\|\Delta\vec{p}\|}{r} \right)^2 \frac{\Delta\vec{v}}{\|\Delta\vec{v}\|}$$

Avoidance

Neighbors: enemies in sight by r and α if not STUNNED

$$\vec{v_{av}} = \sum_{i=0}^{n} v_{max} \left(\frac{r - \|\Delta\vec{p_e}\|}{r} \right) \frac{\Delta\vec{p_e}}{\|\Delta\vec{p_e}\|}$$

Separation

Neighbors: team in sight by r and α no matter their state

$$\vec{v_d} = -v_{max} \frac{\Delta\vec{p}}{\|\Delta\vec{p}\|} \left(\frac{r - \|\Delta\vec{p}\|}{r} \right)^2$$

Seeking/Homing/Mineral Cohesion

Target: Some saved target either from memory or found in sight

$$\vec{v_h} = v_{max} \frac{\vec{p_t} - \vec{p}}{\|\vec{p_t} - \vec{p}\|}$$

Clearance

Neighbors: team in sight by r and α if they re not GUARDING or STUNNED

$$\vec{v_{cl}} = v_{max} \frac{\Delta \vec{p}_{\perp}}{\|\Delta \vec{p}_{\perp}\|}$$